

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-20. (Cancelled)

21. (Currently Amended) A femoral component for a total knee joint replacement comprising,

a plurality of segments, each of said segments having a femoral fixation surface adapted to be positioned on a distal end of a femur and at least one assembly surface adapted to be joined to an assembly surface of an adjacent one of said segments said assembly surface being generally planar and arranged to be oriented generally in a plane extending in a proximal-distal direction and in an anterior-posterior direction when said femoral fixation surface is positioned on said distal end of said femur,

wherein at least two adjacent segments each comprise a bearing surface on an anterior portion of said component, said assembly surfaces of said segments being in mutual contact and said bearing surfaces of said adjacent segments being positioned to form a generally continuous bearing surface on an anterior portion of said component,

wherein edges of said mutually contacting assembly surfaces on portions of the assembly surfaces closest to the generally continuous bearing surface are recessed below said generally continuous bearing surface on an anterior portion of said component,

wherein each of said plurality of segments is configured to be separately inserted through an incision in a person and assembled to another of the plurality of segments after insertion through the incision,

wherein the assembly surface of each segment has a beveled corner.

Claims 22-27. (Cancelled)

28. (Previously Presented) The femoral component for a total knee joint replacement of Claim 21, additionally comprising:

at least one fastener holding said assembly surfaces in mutual contact.

29. (Previously Presented) The femoral component for a total knee joint replacement of Claim 21, wherein said assembly surfaces are provided with self-alignment structures.

30. (Previously Presented) The femoral component of a total knee joint replacement of Claim 29, wherein said self-alignment structures are at least one projection on a first one of said assembly surfaces and at least one complementary depression on a second one of said assembly surfaces adapted to mate with said first one of said assembly surfaces.

31. (Previously Presented) The femoral component for a total knee joint replacement of Claim 21, wherein the segments are each formed of one of titanium, cobalt-based alloy, alumina, and zirconia.

32. (Previously Presented) The femoral component for a total knee joint replacement of Claim 21, wherein the assembly surface of each segment is oriented generally perpendicularly to the femoral fixation surface and the bearing surface of the segment.

33. (Previously Presented) The femoral component for a total knee joint replacement of Claim 28, further comprising at least one bolt that connects the segments, wherein the assembly surfaces of the segments have holes through which the bolt can be passed to align and fasten the segments together.

34. (Previously Presented) The femoral component for a total knee joint replacement of Claim 29, wherein the self-alignment structures secure the segments together.

35. (Withdrawn) The femoral component for a total knee joint replacement of Claim 34, wherein the self-alignment structures include one of a dovetail joint and an interference fit joint.

36. (Previously Presented) The femoral component for a total knee joint replacement of Claim 30, wherein the at least one projection includes a pin.

37. (Previously Presented) The femoral component for a total knee joint replacement of Claim 36, wherein the pin is tapered.

38. (Withdrawn) The femoral component for a total knee joint replacement of Claim 30, wherein the at least one projection has a v-shape configuration and the at least one complementary depression has a v-shape depressed configuration.

39. (Previously Presented) The femoral component for a total knee joint replacement of Claim 21, wherein the assembly surfaces of the segments are positioned to minimize contact with one of an overlying patella and an overlying patellar component.

40. (Previously Presented) The femoral component for a total knee joint replacement of Claim 21, including a condylar portion with a peak, wherein the assembly surfaces are positioned away from the peak.

41. (Previously Presented) The femoral component for a total knee joint replacement of Claim 21, including two condylar portions with a groove between the condylar portions, wherein the assembly surfaces are positioned in the groove.

42. (Previously Presented) The femoral component for a total knee joint replacement of Claim 21, wherein the edges of said mutually contacting assembly surfaces form a mating line that is recessed below said generally continuous bearing surface on the anterior portion of said component.